

SCIENCE & GOVERNMENT REPORT

22nd Year of Publication
The Independent Bulletin of Science Policy

Volume XXII, No. 1

P. O. Box 6226A, Washington, D. C. 20015

© January 15, 1992

Anybody Seen 1300 Computers?

Missing at NIH: Millions in Lab and Office Equipment

It is difficult to believe that 1300 personal computers, 1622 centrifuges, and several thousand other items in the \$1000-plus range are unaccounted for on the Bethesda, Md., campus of the National Institutes of Health, site of several administrative upheavals in recent months.

But according to a scorching memorandum from NIH Director Bernadine Healy to her senior managers, a "wall-to-wall inventory" has failed to locate the equipment on the 305-acre campus, where the staff, at all levels, numbers 15,000, occupying some 60 buildings.

Shocking? Hang on. NIH, heretofore tranquil, has been rattled by front-office *diktats* since Healy came on board last April. In this latest in the series, as with its predecessors, it is useful to distinguish between intentions and events.

The inventory originated in NIH's confession of "material weakness" in tracking its equipment, a *mea culpa*, Healy's memo explains, issued in 1989 under the glare of an obscure statutory directive, the Federal Managers' Financial Integrity Act. The ensuing inventory did account for over

missing inventory may be due to poor record-keeping and failure to locate equipment actually on the campus. In response to SGR's inquiry, the NIH spokesman predicted that the final reckoning would turn out to be far lower than dollar figures cited by Healy. "Preliminary checks indicate," he said, "that a lot of the missing equipment was 'surplused' or loaned or donated without proper documentation." SGR's sense of the matter is that some filching has, of course, occurred, as is common in workplaces, but that the losses are not monumental or unusual.

Nonetheless, the campus has been in a bit of an uproar in recent weeks as property surveyors made the rounds in quest of items listed on ancient and current property lists. Accord-

(Continued on Page 3)

In Brief

From thousands of Congressional appropriations measures, the first overview is now available of how R&D fared in the last session—the annual budget report of the Science Policy Research Division of the Library of Congress, covering funding for the current fiscal year. The agency-by-agency review shows that most R&D budgets were increased, though Congress often fell short of the Administration's requests. Titled *Research and Development Funding: FY 1992* (15 pp.), copies are available without charge from: Science Policy Research Division, Library of Congress, Madison Building, Washington, DC 20540; attn. Ms. Hall; tel. 202/707-6030.

Basic research, often cited by the chieftains of science as shortchanged, increased 65 percent in constant dollars between FY 1980-91, according to the budget review.

A five-member delegation from the House Science, Space, and Technology Committee is headed across the Pacific this month. Led by Chairman George Brown (D-Calif.), the group, according to a Committee press release, will visit Hong Kong to discuss the future of American businesses under forthcoming Chinese rule. In Tokyo, the Congressmen are scheduled to discuss cost-sharing and participation in "big" science projects.

The National Academy of Sciences' long-in-the-works report on managing scientific misconduct is running several months behind schedule and is now expected in March. Meanwhile, NIH is moving along with plans to rewrite the ground rules for policing misconduct and reorganize its Office of Scientific Integrity. Some members of the Academy Committee complain that the report is too soft, others that it's too harsh. "Dissenting" remarks may be included.

A Peek at NIH's Strategic Plan—P. 2

Japan Still Coy on Help for SSC—P. 5

200,000 items of equipment, worth more than \$600 million, all now recorded in a "new automated property information system," Healy stated.

But, she also noted, "Thousands of items worth many millions of dollars remain unaccounted for." Her memo added that the purchase prices of the missing gear, some dating back to 1972, total \$133 million, with current value estimated at \$33 million. Though the search goes on, Healy said, "the results to date are highly disturbing." The evidence for that expression of concern is, however, short of persuasive, given that some of the equipment initially logged as unaccounted dates back nearly 20 years, and some has been found since the initial inventory.

Titled "Recovery of Unaccounted for NIH Equipment," the Healy memo, dated December 11, urged the heads of NIH's institutes, centers, and divisions to look again, "especially [for] those items defined as having personal appeal," and report back by December 31. The search, however, proved to be so daunting that as of January 13, it remained unfinished. The completion date is now "as soon as possible," according to an NIH spokesman.

Healy's memo acknowledged that "a large part" of the

NIH Strategic Plan: Bio-Megalomania in Bethesda?

Frequent demands from politicians for science to declare priorities are about to get a blockbuster response from the National Institutes of Health, where the Healy Administration is finishing a massive document, The NIH Strategic Plan, in the works since last May and scheduled for release this spring. SGR has obtained a draft (dated December 31) of Director Healy's foreword to the Plan and an unsigned introduction, both of which invite suspicions that bio-megalomania has broken out in Bethesda. Excerpts follow.

Foreword

The entire nation, indeed the entire world, has a stake in NIH's success. Today and for the foreseeable future, that stake is greater than at any time in NIH's existence. . . . In recent years, as the breadth and depth of research programs increased, the flow of new knowledge has increased from a figurative trickle to a storm surge. The pace of progress has been so rapid that the volume of biological knowledge gained over the past two decades dwarfs the cumulative contributions of the preceding centuries. . . . We need to reassert our vision, to convey the relevance of our strivings to every American, to capture and demonstrate the synergy that accrues to our preeminence as the world's leading and largest performer and benefactor of biomedical and behavioral research. . . .

Although a novel undertaking for NIH, the Strategic Plan does not sever ties with the past. Rather, it builds on past accomplishments, organizational strengths, and mechanisms of proven value. Nor is the Strategic Plan a grand design that imposes rigid timetables. Rather, it creates a framework for ordering NIH's organizational thinking and charts an initial course for our efforts.

We will have to modify that course periodically. There will be unexpected breakthroughs—leaps into a new dimension that will create unanticipated opportunities. A good plan . . . can actually foster pathbreaking research. It can nurture intellectual ferment and creativity and encourage scientists to be innovative, to take calculated risks, and to cross disciplinary boundaries. . . .

Also addressed is one of this nation's most vexing social and economic problems—the spiraling cost of health care. In developing the Strategic Plan we have factored these larger societal questions into the context of our thinking and have noted the correlations between biomedical research and its impact on health and health-care costs and its contributions to US global competitiveness. . . .

The NIH Strategic Plan is a living, evolving strategic document—a guide for a journey into new realms of knowledge on the way to improved health and superior, more cost-effective health care for all Americans.

Clearly, that is a destination worth reaching, and the journey it entails is one [NIH, the public and its representatives] must embark on together. To do otherwise, is to squander opportunities that are largely of this nation's own making.

Introduction

This Strategic Plan represents a bold quest to seize and expand on the opportunities of the present, to ensure US leadership in the future, and to help our nation achieve the twin aspirations of a healthier people and a healthier economy. . . . Furthermore, it is a unified vision of the future, shared by all categorical institutes, centers, and divisions. It is designed to spur the creative energies and talents of the 2500 intramural scientists [at NIH] and the 50,000 NIH-supported researchers at 1800 non-federal laboratories across the country to find cures for devastating diseases through focused, interdisciplinary research. . . .

The critical nature of the Strategic Plan is reflected in the swiftness with which the agency dedicated itself to its development. . . .

The Strategic Plan has two components. One component consists of the compelling, trans-NIH scientific issues identified across 15 *Promising Areas of Science*. . . . More than 800 individual science initiatives were developed by NIH and ADAMHA [Alcohol, Drug Abuse, and Mental Health Administration] research institutes, centers and divisions in support of the 15 *Promising Areas of Science*. Following an intensive review process, the more than 800 science initiatives were reconstructed into 70 overarching science initiatives of which 17, called *Scientific Opportunities Initiatives (SOIs)*, will be tracked very closely during the first implementation phase of the plan. . . .

The second component of the Strategic Plan involves 11 areas of science policy and administration, or *Strategic Policy Issues*. This second component is critical because, however spectacular the science may be or however noble our specific scientific objectives, if our science is not undergirded by a sturdy framework, our objectives will be very difficult to realize. . . .

During the Strategic Plan's implementation phase, NIH will track and evaluate the progress of the Scientific Opportunity Initiatives. Results of the trans-NIH evaluations will be guide adjustments to the plan and help the agency identify what steps, if any, are needed to enhance prospects for success.

The SOIs do not stand apart from the broader fabric of biomedical and behavioral research. Indeed, all are interwoven into the entity of the NIH-supported research enterprise. . . .

The Strategic Plan also includes policy initiatives for anticipating and addressing the social, legal, ethical, philosophical, and economic issues arising from biomedical progress and from shifting public priorities and needs. . . . Inevitably, scientific progress will generate occasional controversy.

The challenge for NIH is to develop an effective framework for anticipating and resolving issues and preventing confrontational stalemates that breed rancor and undermine scientific progress.

... Not a "Ludicrous Issue," Institute Head Declares

(Continued from Page 1)

ing to one NIH member, staffers have been prodded to search their memories to account for the disposition of equipment long-ago recorded as purchased but nowhere to be found or accounted for in NIH records. In these circumstances, tales are told of creative retrospective record-keeping.

As reported in the minutes of the December 17 meeting of lab chiefs at the National Institute of Diabetes and Digestive and Kidney Diseases, the inventory issue was discussed by NIDDKD Director Philip Gorden and Intramural Deputy Director Edward Steers Jr.

Steers told the meeting, according to the minutes, "There is \$6 million worth of property unaccounted for in our institute." In minutes-style paraphrase, the report continues:

"Dr. Gorden shared his thoughts on the property inventory. We have become desensitized lately due to ludicrous issues. The accountability for property is not ludicrous, it is right. We have to make it work. The Institute must have a system even if the NIH system doesn't work. The responsibility has to be with the lab/branch chiefs. Dr. Gorden thanked everyone for a tremendous response to this request."

"Ludicrous issues?" Queried by SGR about that term, Gorden said he was referring to restrictions on outside activities, such as teaching and lecturing, that were previously considered appropriate for NIH staff members. "These [restrictions] make it hard to recruit and hold staff," he explained, and in terming the restrictions "ludicrous," he said, he was attempting to distinguish them from the inventory issue, which he said he regards as a serious matter. Gorden also said that further inventorying had reduced the unaccounted-for \$6 million at his institute to less than \$1 million.

Healy's memo spelled out strict tasks for the managers of NIH. In cases where equipment has been loaned, donated, or taken by departing staff members without proper authorization, she directed them to complete the required paper-

work or recover the equipment. The memo also called for notifying all NIH staff members "who have or had a collaborative relationship, either as outside work or as official business, that involved the sharing of equipment, to secure the immediate return of any NIH equipment involved." The memo added that "This does not apply to properly established CRADAs [Cooperative Research and Development Agreements, designed to promote collaboration between NIH staff and private firms], if all equipment furnished under the CRADA has been fully documented."

Healy's memo also directed the managers to report the steps they're taking to assure tighter control over equipment. "You should also describe what actions you plan to take to strengthen the security of highly vulnerable equipment (such as balances, personal computers, TV monitors, video cassette recorders, telephone answering systems, pagers, etc.), including use of cabling and anchoring devices, where appropriate."

The intensity of the Healy memo may in part be attributed to grandstanding for Congress, which customarily goes bombastic on larcenies of mundane government property. Unlike the savings and loan debacle, which exceeds the annual NIH budget 20-fold, office equipment is both easily comprehensible and photographable for television. It may be assumed that Healy recognized the inventory gaps as a ticking bomb.

Ever since she trashed the NIH Office of Scientific Integrity and pushed out two oldtime NIH chieftains, William Raub, the No. 2 at NIH, and Edward Rall, Deputy Director for Intramural Research, the biomedical community has come to wonder more and more what's going on at NIH. Opinions about Healy are plentiful and strong, mainly polarized at approval or disapproval—both strongly expressed, though she's held the directorship only since April. On the negative side, the commonly heard assessment concerning administrative style is that she's impulsive, headstrong, impatient, and resistant to persuasion. Views are only now coalescing on scientific matters, but the anti's tend to the position that Healy aims to squeeze biomedical research into a grand masterplan that is inimical to the uncertainties of science. On the positive side, the Healy admirers say NIH was long overdue for strong leadership and that Healy's assertiveness is precisely what's needed in the front office.

The debate extends to the issue of NIH's Congressional relations. Healy's scrapping with Congressman John Dingell over NIH's management of misconduct [SGR, August 1: "NIH Director Defends Curbs on Misconduct Office"] has gone into the scorecards of the Washington biomedical community as gutsy but counterproductive. On the other hand, she is well-regarded where it counts most for NIH on Capitol Hill, the Appropriations Committees.

What rarely gets noted about the NIH enterprise is that

(Continued on Page 4)

© 1992, Science & Government Report, Inc.

Editor and Publisher
Daniel S. Greenberg

European Correspondent
Francois Segulier (Paris)

Associate Publisher
Wanda J. Reif

Circulation Manager
Glen D. Grant

Independently published by Science & Government Report, Inc., twice monthly, except once each in January, July, August, and September. Annual subscriptions: Institutions, \$358.00 (two years, \$610.00). Bulk and individual rates upon request. Editorial offices at 3736 Kanawha St. NW, Washington, DC 20015. Tel. (202) 244-4135. For subscription service: PO Box 6226A, Washington, DC 20015. Tel. 1-800-522-1970; in Washington, DC 785-5054. Reproduction without permission is prohibited. SGR is available on University Microfilms International. Claims for missing back issues will be filled without charge if made within six weeks of publication date. ISSN 0048-9581.

Academy Hires Congressional Vet for Facing Dingell

Since Congressman John Dingell began rummaging in its indirect-cost accounts, the National Academy of Sciences (NAS) has employed the consulting services of a veteran of longtime investigative experience on Capitol Hill, Franklin R. Silbey.

The engagement between the honorary pinnacle of American science and an old "Hill" hand reflects the difficulties that have developed in the relationship between science and government. Over dangerous terrain, skilled guidance is valuable.

Silbey, who signed on with the Academy in November, served as a Congressional staffer for 16 years, including a stint with Dingell's predecessor as Chairman of the House Energy and Commerce Committee, Rep. John Moss (D-Calif.). Since leaving Congressional staff work in 1983, Silbey has been running his own company, Franklin R. Silbey Associates, the scale of which he describes as "me and people as I need them."

Staffers on Dingell's Oversight and Investigations Subcommittee, homebase of the indirect-costs inquiries, are well-acquainted with Silbey and appear to regard him as a charming character. He is also known on the Senate side of Capitol Hill, having once worked for Senator Orrin Hatch (R-Utah).

Silbey says he is a consultant and not a lobbyist, the

difference being, he explains, that he advises his clients but does not attempt to influence those who are causing them problems. In his dealings with the Academy, he told SGR, "I advise them on what kind of situation they confront and how best to cooperate with the Oversight [Subcommittee] people in order to make sure appropriate responses are made."

If Academy President Frank Press is called to testify before the formidable Dingell, a Silbey-guided response would probably contrast sharply with that of two other academic eminences summoned by Dingell, David Baltimore and Donald Kennedy, both of whom also engaged counsel on how to deal with Dingell.

The nature of the advice they were offered and whether it was followed are not known. Both came out swinging against the Chairman and his inquiries, Baltimore on the issue of scientific misconduct, Kennedy on indirect costs. They assailed Dingell as an enemy of free inquiry and science, rejecting the Congressman's insistence that the only issues at hand were the fabrication of scientific data and the misuse of federal funds.

After that, it was downhill for both academic leaders. Under the heat of adverse press attention, some of it fed by damaging information developed by Dingell's investigators, Kennedy resigned as President of Stanford University and Baltimore resigned as President of Rockefeller University.

The Academy, which conducts studies for federal agencies, is one of many large scholarly recipients of federal research funds that government auditors, prodded by Dingell, have been auditing in recent months. In 1989, federal agencies provided \$147 million of the Academy's \$180 million income.

Recently, on the basis of its own audit, the Academy voluntarily refunded \$168,723 to the government for what the NAS described as "occasional errors in allocating costs" of various items in the NAS executive offices' budgets. These included expenditures for upgraded airline tickets, trinkets for ceremonial occasions, a longterm Washington hotel lease for an NAS official who lives in another city, and other items, no one of them very large. The Academy furnished Dingell's Subcommittee with an accounting of the refunds and pledged its cooperation in any inquiry that he may undertake.

Silbey told SGR that he is pleased to work with Academy President Press and other senior Academy officials. "They are the finest people," he said.

Dingell's Subcommittee planned a hearing last fall at which auditors and others from federal supervisory and investigatory bodies were scheduled to testify on indirect costs in academic institutions. At the last minute, end-of-session pressures interrupted the schedule and the hearing was postponed. The hearing has been set for January 30. A separate show is planned for academic witnesses.—DSG

Lost in Bethesda

(Continued from Page 3)

its world-class science is embedded in cumbersome and soggy administrative processes. Paper moves through NIH at a torpid pace. Many of the shortcomings originate in laws and regulations that rigidly govern the expenditure of federal funds. But NIH compounds the difficulties with layers upon layers of committees for virtually everything it considers. Delays are even further compounded because of an extremely lean legal staff—something that Healy has taken steps to beef up.

In its scientific dimensions, the NIH Bethesda campus is notably unbureaucratic and open in style and culture. It is often described as an oversized graduate school. In an unfortunate commentary on contemporary attitudes toward government, NIH is often admired as the least governmental of government agencies. In the administrative dimension, however, the competence, dedication and interest of the staff varies widely. Some feel they are part of a great scientific enterprise, while others are just holding down a job. Many are lively and innovative. But segments of NIH appear tired and bored. Previous Directors tended to take NIH as it is and focus on good relations with the scientific community and the Congress. Healy is the first to come in and shake up the place. The diatribe on equipment inventories is a sensible preemptive move against a Congressional attack. It also sounds an alert for the NIH staff.—DSG

Japan Again Declines to Provide Money for SSC

Japan didn't say yes but didn't say no to President Bush's appeal for \$1 billion to help pay for the Superconducting Super Collider (SSC), under construction in Texas. Japan, in effect, repeated the indecipherable "maybe later" that it has dangled before the SSC's supplicants for several years.

Does that mean the project will languish or die?

It could, but don't count on it. Technically, the SSC is in default of assurances by Presidents Reagan and Bush that one-third of its costs would come from non-federal sources and that the SSC's budget would not impinge on other fields of science. The House passed a bill embodying those conditions, though the Senate never followed up. Nevertheless, the political balm soothed the financial anxieties of scientists in other fields and won over a Congress uneasy about the costs of mammoth science projects. With Texas contributing \$1 billion, at least \$1.7 billion was needed from abroad. The Administration oozed confidence about getting it.

However, the political pledges have turned out to be empty. Foreign money has not been forthcoming and the SSC is squeezing other fields of science. Bad enough, but the lack of help from abroad is not the worst problem. The budget outlook for the SSC has worsened as the cost estimates have soared from \$5.3 billion in 1988 to the current official price tag, \$8.2 billion. But even the latter figure is low—by \$4 billion—according to a staff assessment that the Department of Energy commissioned and then set aside in something of a state of shock.

Nonetheless, the worst fate of the SSC is likely to be a slowed pace of construction, and maybe not even that. The project managers have shrewdly spread the wealth far beyond the Texas site, signing up scores of companies for high-tech components and services, thus building a pork-barrel constituency keen for the SSC, especially in these hard economic times.

Fulfillment of the foreign-aid requirement appears to be beyond hope. But for appearances sake, the SSC is buying parts from Japan, South Korea, and China at prices that it computes as lower than domestic costs—and crediting the difference as foreign contributions.

Several important lessons are to be learned from these high-tech fiscal acrobatics. First, Japan, the main hope for substantial foreign assistance, is justifiably miffed by American pretensions that the SSC is an "international" research facility and therefore merits foreign contributions. The SSC was planned in the US and is being built in the US. Foreign participation was an afterthought necessitated by financial stringencies. Presidential Science Adviser D. Allan Bromley, who took office after the SSC project was already launched, argues strongly that internationalism in science should commence at the very early planning stage.

That process should be linked to recognition that the huge costs of mega-science projects heighten the importance of international collaboration. The US, with the

world's biggest science budget, can finance any project, including the SSC. But big as the budget is, it cannot cover all the promising possibilities in science. Cost-sharing makes sense.

Finally, Congressional unhappiness about the SSC's runaway costs demonstrates the need for a more reliable estimating process. The strategists of defense and space procurement long ago devised the tactic of pricing low, plunging ahead, and then, after spending their initial allotment, declaring that it's too late to turn back. With \$1 billion spent and more committed, the SSC's managers are now positioned to argue that the project is past the point of no return.

Unfortunate but true, financial control over the SSC has been botched at every step, permitting the project to reach a stage where, politically, it is probably unstoppable. Potshots against the project are still fired off by the few members of Congress who remain galled by the misleading tactics employed by the SSC lobby, but the transition from low-level spending to the big money took place in the last session without a hitch.

Last year, the SSC project operated on a budget of \$243 million. With construction getting under way, the Administration requested \$533 million. The outcome was an appropriation of \$483 million. To maintain that spending pace, the SSC coalition will have to perform some elegant steps in the budget process. But some favorable circumstances are coming along just in time to assist the quest for even plumper funding. The budget agreement that segregated defense and domestic funds is sure to be modified or eliminated, thus freeing up Pentagon money for civilian programs. The SSC must contend with many competitors for those funds, but with most Democrats and even many Republicans clamoring for public works to create jobs and stimulate the economy, it will be difficult to slow, let alone terminate, perhaps the biggest public works project now going, the SSC.

Letter to Editor

Academy's Watergate Apartment

Your [December 15] article on compensation at non-profit organizations incorrectly stated that the National Academy of Sciences no longer owns the apartment at the Watergate [that has served as the NAS President's residence].

NAS President Frank Press no longer resides in that apartment, and thus its use is not listed as compensation to him. But the Academy still owns the apartment. We are leasing it to a tenant on a short-term basis and intend to provide it as the residence for the next NAS President. The new President will be elected early in 1993 and will take office on July 1, 1993.

Steven Push

Director, News and Public Information
National Academy of Sciences

Critical Tech Institute Proceeding Under New Formula

The Critical Technologies Institute (CTI)—a Congressionally conceived think tank charged with spotlighting hot technologies—is finally nearing birth, after initial rejection by the White House and a reformulation by its Congressional sponsors.

The CTI symbolizes the Democratic push for federal support for the high-tech industrial economy and the wavering attitude of the Bush Administration. If the CTI manages to thrive, its ideological significance will be far greater than its budget, a mere \$2 million a year, which will finance a staff of 15-20.

As originally designed by its chief sponsor, Senator Jeff Bingaman (D-New Mexico), the CTI was to be tightly linked, through leadership and management of its budget, to the White House Office of Science and Technology Policy (OSTP). To be financed by funds diverted from the Pentagon to OSTP, it was to identify important technologies, assess American standing in world competition for developing and exploiting them, and plot strategies to keep America No. 1. The White House, sensing abhorred "industrial policy" disguised as research, turned down the proposition last fall, explaining that the CTI's functions were already being nicely attended to by OSTP.

As recast in the Defense Authorization bill last November, CTI, still financed by Defense money, is to come into being as a distant ward of the National Science Foundation, which is described in the request for proposals as its "sponsor." The rejected formulation allowed for the possibility that the CTI would be operated as a Federally Funded Research and Development Center (FFRDC) or as a direct appendage of OSTP. But under the new plan, it's to be an FFRDC, which means paid for by the government, but run by a contractor. NSF is managing the competition for the contract and will channel the Defense money to CTI, but will not be operationally involved.

The CTI is to be managed by a Presidentially appointed Operating Committee, consisting of designees of the heads of the Departments of Defense, Energy, Commerce, Health and Human Services, plus designees of the heads of NASA and NSF. The membership will also include the Director of OSTP and four other Executive Branch officials. The Chairman of the Committee is to be chosen from those "who are also senior officials in the Executive Office of the President"—which allows for selection of the Director of OSTP but doesn't assure it.

January 31 is the deadline for applications to run the CTI. NSF expects to select the contractor by the end of February and to have the CTI in operation in the spring.

Bingaman intended the CTI to serve as an early-warning and strategy center for techno-economic competition. The White House has accepted the CTI, but without any evident zest for its purpose. The Washington landscape is dotted with similar Congressional creations designed to prod the President. Few have been effective.

In Quotes: Aerospace Can't Adapt to Civilian Markets

From the Annual Year-End Review and Forecast, December 11, by Don Fuqua, President of the Aerospace Industries Association (AIA), Washington lobby for the major aerospace and defense firms and associated high-tech companies.

Maintaining a strong defense industrial base will require substantial industry investment in technology development and production programs. It goes without saying that a financially weak industry cannot support such investment. The Department of Defense acknowledges that fact.

I was interested to note that the recently issued DoD Report to Congress on the Defense Industrial Base lists the financial strength of defense-related firms as one of the four primary considerations in the future viability of the defense industrial base.

AIA certainly agrees with that. We do not agree with the report's contention that the aerospace industry can diversify into consumer production and—I quote the report—"shift from defense to commercial production and then back again when required."

The industry will diversify, and is now doing so, into certain areas where its high technology capability can be effectively utilized. But there are not many such opportunities. Defense contractors cannot effect broad-scale diversification into the consumer field for two very good reasons:

One, the consumer market simply is not there. Two, the industry has learned the hard way the lesson that high-tech labor and facilities are not readily adaptable to low-tech consumer products. The history of our industry is replete with examples of failed attempts to do so. The industrial base report underlines recent positive DoD actions aimed at improving industry earnings. It does not, however, address the many other profit-restricting policies and practices still in effect.

Our industry is not making a fair return on its investments. Profits on defense work are declining below a reasonable level; debt is increasing; investments in capital equipment and R&D are declining. Clearly, the government cannot continue to expect industry to help finance defense R&D and production.

If the government really wants a strong defense industrial base, it must reinforce the cornerstone by fostering the improved financial health of the aerospace/defense industry. Without such action, all the other industrial base strengthening measures DoD has outlined are so much wishful thinking.

More In Print: Canadian Grants, Physics in '91, Etc.

(Continued from Page 8)

List of MRC Grants and Awards: 1990-91 (257 pp.) and **Report of the President: 1990-91** (55 pp., both no charge), from the Medical Research Council of Canada, an inventory of 4300 grants, awards, and related expenditures by the MRC in the year ending last March 31, for which spending totaled Canadian \$235 million, plus an overview of the research program by Pierre Bois, who retired last June after 10 years as MRC President.

Order from: Medical Research Council of Canada, Communications Branch, 20th Floor, Jeanne Mance Building, Tunney's Pasture, Ottawa, Ont., Canada K1A 0W9; tel. 613/954-1382.

Physics News in 1991 (76 pp., \$5 for first copy, \$3 each for more), from the American Institute of Physics, annual review of developments in major fields of physics. The articles, short and clear, are accompanied by citations of research papers.

Order from: American Institute of Physics, c/o AIDC, 64 Depot Rd., Colchester, Vermont 05446; tel. 1-800-445-6638. In Vermont: 802/878-0315.

Osteoporosis Research, Education and Health Promotion (68 pp., no charge), prepared by the NIH National Institute of Arthritis and Musculoskeletal and Skin Diseases under a directive from the Senate Appropriations Committee, this report typifies the symbiotic harmony of Bethesda and Capitol Hill. As requested, the report inventories osteoporosis-related activities in the parent Department of Health and Human Services, and recommends additional lines of research, thus arming legislators for annual appropriations battles with political appointees who insist enough is being done. This report, dated September 1991, is described by an NIH staffer as the finished version of a draft delivered in response to the Senate deadline of June 1990.

Order from: HHS Osteoporosis Report, National Institute of Arthritis and Musculoskeletal and Skin Diseases, Box AMS, 9000 Rockville Pike, Bethesda, Md. 20892; tel. 301/495-4484.

1992 Heart and Stroke Facts (48 pp., no charge), annual report by the American Heart Association, intended for lay readers, includes heaps of statistics about cardiovascular disease, including regional variations in the US and extensive international comparisons. Among the interesting items: Japan is lowest among industrialized nations in male death rates from cardiovascular disease, with France in second place; highest in mortality: Hungary.

Order from: American Heart Association, Inquiries Office, 7320 Greenville Ave., Dallas, Texas 75231; no telephone orders.

Medical Malpractice: Alternatives to Litigation (GAO/HRD-92-28; 30 pp., no charge), by the General Accounting

Office (GAO), says little use is made of arbitration procedures enacted in 15 states since 1975 as an alternative to medical-malpractice litigation. Among these states, the GAO found, only Michigan has a program to make patients aware of the arbitration option. Between 1975 and 1991, 882 cases were filed in Michigan, of which 272 went to arbitration hearings. The report includes a state-by-state list of methods of selection for arbitration panels and brief descriptions of no-fault programs in several states.

Order from: USGAO, PO Box 6015, Galithersburg, Md. 20877; tel. 202/275-6241.

Job Changes & Appointments

Kenneth I. Shine, Dean of the UCLA School of Medicine, has been appointed President of the Institute of Medicine (IOM), the health-policy wing of the National Academy of Sciences, succeeding **Samuel O. Thier**, now President of Brandeis University. Shine will join the IOM on a full-time basis in July. The IOM President is appointed by the President of the Academy of Sciences with the advice of the Councils of the two organizations.

Everet H. Beckner, former Vice President for Weapons Programs at the Sandia National Laboratories, has been appointed Principal Deputy Assistant Secretary of Energy for Defense Programs, with responsibility for design, development, testing, maintenance, and dismantlement of nuclear weapons. Since July 1990, Beckner has served as a Special Science Adviser to the DOE Secretary.

William E. Small has been appointed Executive Director of the Association of Biotechnology Companies, a Washington-based organization that claims 270 members in 25 countries. Small is currently Communications Director of the American Nurses Association. He formerly headed communications at the National Bureau of Standards and served as a Senate staff member.

To Order or Renew

Science & Government Report
Northwest Station, Box 6226A
Washington, D.C. 20015

☐ Renew my subscription; ☐ Check enclosed

☐ Enter my subscription; ☐ Please Bill

Institutional subscribers: one year, \$358.00 ☐
two years, \$610.00 ☐

(Foreign airmail, \$35.00 per year; foreign surface \$15.00 per year additional.)

Name

Address

Zip

**Toll-Free Subscription Service: 1-800-522-1970;
In Wash., D.C.: 785-5054**

In Print: Job Guide, Global Change, Hailing Science

The publications listed are obtainable as indicated—not from SGR.

Employment Guide for Scientists and Engineers: A Practical Job Hunter's Manual (113 pp.), by the Institute of Electrical and Electronics Engineers (IEEE), third edition since 1982, advice on job hunting, intended for experienced professionals (student edition coming soon), plus a companion volume, **Directory of Employers** (80 pp.), listing several hundred firms, research institutes, etc. Topics in the *Job Hunter's Manual* include recovering from the emotional distress of job loss, finding leads for new employment, preparing resumes, analyzing whether a prospective job is appropriate, and current salary rates.

For unemployed scientists and engineers, free copies are available from: IEEE United States Activities Office, 1828 L St. NW, Suite 1202, Washington, DC 20036-5104; tel. 202/785-0017; otherwise \$14.95 for IEEE members, \$19.95 for others.

Order paid copies from: IEEE Service Center, 445 Hoes Lane, PO Box 1331, Piscataway, NJ. 08855-1331; tel. 1-800-678-IEEE. Specify IEEE Catalog No. UH0186-7, Experienced Engineer Edition.

Updating the Five Year Plan: Biomedical Research Funding—Fiscal Year 1993 and Beyond (10 pp., no charge), a skimpy report on a big Consensus Conference on NIH funding sponsored in November by the Federation of American Societies for Experimental Biology (FASEB), with NIH officials and representatives of other societies among those taking part. The consensus was that NIH funding should rise from this year's \$9.7 billion to \$10.4 billion next year and step up to \$14.2 billion by 1997. Expressing support for NIH Director Healy's commitment to develop a Strategic Plan for NIH, the conferees urged emphasis on training and investigator-initiated research.

Order from: FASEB, Office of Public Affairs, 9650 Rockville Pike, Bethesda, Md. 20814; tel. 301/530-7075.

Global Environmental Change: Understanding the Human Dimension (308 pp., \$29.95, plus \$3 for shipping), by the National Academy of Sciences Committee on the Human Dimensions of Global Change, says research on "human interactions in global environmental change" lags behind studies of physical and biological processes. The report calls for an expansion of training and research, including the establishment of "about" five national research centers with long-term federal and private support. Oran R. Young, Institute of Arctic Studies, Dartmouth College, chaired the Committee that produced the report.

Also from the Academy: **Rethinking the Ozone Problem in Urban and Regional Air Pollution** (489 pp., \$47.95, plus \$3 for shipping), by the NAS Committee on Tropospheric Ozone Formation and Measurement, says ozone concentra-

tions remain a major pollution hazard, despite 20 years of control programs, and recommends an expansion of research, including major efforts to improve measurement techniques, which the Committee says are currently unreliable and possibly misleading. The Committee, chaired by John H. Seinfeld, of Caltech, also concluded that for reducing ozone concentrations, more emphasis must be placed on controlling emissions of nitric oxide and nitrogen dioxide.

And coming in February or March from the Academy: **Restoration of Aquatic Ecosystems: Science, Technology, and Public Policy** (\$39.95, plus \$3 for shipping), by a committee chaired by John Cairns Jr., Virginia Polytechnic Institute and State University.

Order from: National Academy Press, 2101 Constitution Ave. NW, PO Box 285, Washington, DC 20005; tel. 1-800-624-6242; in the Washington, DC, area: 202/334-3313.

Science and Engineering: Research Benefits (50 pp., no charge), from the National Science Foundation, a slick, inhouse production apparently in response to the eternal complaint that science doesn't do enough to tell its story to the public. According to an NSF staff member, it replaces a "dowdy" booklet from the early 1980s. Written in lay language, with colorful illustrations, the new version describes technologies that have sprung from NSF-style basic research. The manner is low-key, even in the section describing NSF's role in science. As such publications go, NSF's is not a bad job, but whether it will contribute to winning hearts, minds, or appropriations for science is another matter. NSF says the print run was 30,000 and that several thousand have already been distributed to universities, state organizations, Congress, etc.

Order from: NSF, Office of Legislative and Public Affairs, Publications, 1800 G St. NW, Washington, DC 20550; tel. 202/357-9498.

Ionizing Radiation Risk Assessment: BEIR IV (22 pp., no charge), from the Committee on Interagency Radiation Research and Policy Coordination (CIRRPC), a government-wide body linked to the White House Office of Science and Technology Policy, in response to a request from the Pentagon for a federal position on risk assessment for low-level ionizing radiation. The report, by a panel chaired by Robert G. Thomas, retired from the Department of Energy, rated as "acceptable for consideration" the risk estimates by the National Academy of Sciences Committee on Biological Effects of Ionizing Radiations (BEIR IV), reported in the Academy's *Health Risks of Radon and Other Internally Deposited Alpha-Emitters*. Also available, the *Seventh Annual Report of CIRRPC* (16 pp., no charge).

Order from: Committee on Interagency Radiation Research and Policy Coordination, 1019 19th St., Suite 700, Washington, DC 20036; tel. 202/653-5505.

(Continued on Page 7)

